



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN THE APPLICATION OF:

SAVERIO CARL FALCO ET. AL.

CASE NO.: BB1167USDIV

APPLICATION NO.: 10/731525

CONFIRMATION NO.:

GROUP ART UNIT: 1652

EXAMINER: UNKNOWN

FILED: DECEMBER 09, 2003

FOR: GENES ENCODING PLANT ADENOSINE 5'-PHOSPHOSULFATE REDUCTASE

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In compliance with 37 CFR 1.97 and 1.98, Applicants bring to the attention of the U.S. Patent and Trademark Office information listed on the enclosed PTO/SB/08 forms.

Benefit of the earlier filing date of U.S. Patent Application No. 09/720,318, filed December 21, 2000 is claimed under 35 U.S.C. 120 for the above-referenced application and only copies of information not previously made of record in the parent are enclosed.

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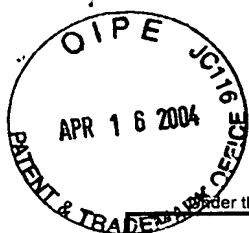
Respectfully submitted,

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Dated: March 29, 2004

Enclosures



PTO/SB/92 (08-03)

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10/731525

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Substitute for form 1449 PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 4

Complete if Known

Application Number	09/720,318
Filing Date	December 21, 2000
First Named Inventor	Saverio Carl Falco et al.
Group Art Unit	Unknown
Examiner Name	Unknown
Attorney Docket Number	BB1167C US PCT

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
X	ne	EMBL SEQUENCE LIBRARY DATA ACCESSION NO: D89631, 07-30-97, SOHLBERG, L.E. ET AL., Nucleotide Sequence of a cDNA encoding a Cys proteinase from germinating bean cotyledons, XP-0021299910	
X	ne	EMBL SEQUENCE LIBRARY DATA ACCESSION NO: O49307, 06-01-98, FEDERSPIEL, N.A. ET AL., XP-002129911	
X	ne	EMBL SEQUENCE LIBRARY DATA ACCESSION NO: D25000, 11-30-93, MINOBE, Y. ET AL., Rice cDNA from root, XP-002129912	
X	ne	FRANK W. SMITH ET AL., PNAS, Vol. 92:9373-9377, 9/1995, Plant members of a family of sulfate transporters reveal functional subtypes, XP-002129913	
X	ne	HIDEKI TAKAHASHI ET AL., Plant & Cell Phys., vol. 39 suppl, pp.S148, 1998, Antisense repression of sulfate transporter in transgenic Arabidopsis thaliana plants, XP-002121793	
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X	ne	EMBL SEQUENCE LIBRARY DATA ACCESSION NO: X96761, 03-25-97, NG, A. ET AL., Isolation & characterization of a lowly expressed cDNA from the resurrection grass Sporobolus stapfianus with homology to eukaryote sulfate transporter proteins, XP-002121791	
X	ne	EMBL SEQUENCE LIBRARY DATA ACCESSION NO: AF016306, 01-08-1998, BOLCHI, A. ET AL., Coordinate modulation of maize sulfate permease and ATP sulfate permease and ATP sulfurylase mRNAs in response to variations in sulfur nutritional status: stereospecific down-regulation by L-cysteine, XP-002121790	
X	ne	EMBL SEQUENCE DATA LIBRARY ACCESSION NO: O48889, 06-01-1998, BOLCHI, A. ET AL.	
X	ne	FRANK W. SMITH ET AL., The Plant Journal, vol. 12(4):875-884, 1997, Regulation of expression of a cDNA from barley roots encoding a high affinity sulphate transporter, XP-002129909	
X	ne	ANTJE PRIOR ET AL., Biochimica et Biophysica Acta, vol. 1430:25-38, 1999, Structural and kinetic properties of adenylyl sulfate reductase from Catharanthus roseus cell cultures	

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12/3/02

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Application Number	09/720,318
Filing Date	December 21, 2000
First Named Inventor	Saverio Carl Falco et al.
Group Art Unit	Unknown
Examiner Name	Unknown
Attorney Docket Number	BB1167C US PCT

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
X	ne	SENTA HEISS ET AL., Plant Mol. Biol., vol. 39:847-857, 1999, Cloning sulfur assimilation genes of Brassica juncea L.: cadmium differentially affects the expression of a putative low-affinity sulfate transporter and isoforms of ATP sulfurylase and APS reductase	
X	ne	JOHN L. WRAY ET AL., Chemico-Biological Interactions, vol. 109:153-167, 1998, Redefining reductive sulfate assimilation in higher plants: a role for APS reductase, a new member of the thioredoxin superfamily?	
X	ne	JULIE ANN BICK ET AL., Current Opinion in Plant Biology, 1998, pp. 240-244, Plant sulfur metabolism - the reduction of sulfate to sulfite	
X	ne	JULIE-ANN BICK ET AL., PNAS, vol. 95:8404-8409, 7/1998, Glutaredoxin function for the carboxyl-terminal domain of the plant-type 5'-adenylylsulfate reductase	
X	ne	JOSE F. GUTIERREZ-MARCOS ET AL., PNAS, vol. 93:13377-13382, 1996, Three members of a novel small gene-family from Arabidopsis thaliana able to complement functionally an Escherichia coli mutant defective in PAPS reductase activity encode proteins with a thioredoxin-like domain and "APS reductase" activity	
X	ne	AMIT SETYA ET AL., PNAS, vol. 93:13383-13388, 1996, Sulfate reduction in higher plants: Molecular evidence for a novel 5'-adenylylsulfate reductase	
X	ne	EMBL SEQUENCE LIBRARY DATA ACCESSION NO: C27405, 08-06-97, SASAKI, T. ET AL., Rice cDNA from callus, XP-002121812	
X	ne	EMBL SEQUENCE LIBRARY DATA ACCESSION NO: AF071890, 06-29-98, MBEGUIE-A-MBEGUIE D. ET AL., Molecular cloning and partial nucleotide sequence of a sulfite reductase from apricot fruit, XP-002128211	
X	ne	EMBL SEQUENCE LIBRARY DATA ACCESSION NO: D50679, 12-01-97, IDEGUCHI, T. ET AL., cDNA cloning and functional expression of ferredoxin-dependent sulfite reductase from maize in E. coli cells, XP-002128212	
X	ne	CHRISTINE BORK ET AL., Gene, vol. 212:147-153, 1998, Isolation and characterization of a gene for assimilatory sulfite reductase from Arabidopsis thaliana	

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Sheet 3 of 4

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Application Number	09/720,318
Filing Date	December 21, 2000
First Named Inventor	Saverio Carl Falco et al.
Group Art Unit	Unknown
Examiner Name	Unknown
Attorney Docket Number	BB1167C US PCT

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
Ne		ANDREAS BRUHL ET AL., Biochimia et Biophysica Acta, vol. 1295:119-124, 1996, A cDNA clone from Arabidopsis thaliana encoding plastidic ferredoxin: sulfite reductase	
Ne		DATABASE WPI, DERWENT PUBL., LTD., JP-62 455773, MITSUBISHI CORP., 9/6/94, XP-002121814	
Ne		EMBL SEQUENCE LIBRARY DATA ACCESSION NO: AU068082, 06/07/99, SASAKI, T. ET AL., Rice cDNA from callus, XP-002128630	
Ne		EMBL SEQUENCE LIBRARY DATA ACCESSION NO: AQ688702, 07/02/99, YU, Y. ET AL., A BAC Endc sequencing framework to sequence the rice genome, XP-002128631	
Ne		SAITO, K., Stress Responses of Photosynthetic organisms, 1998, pgs. 215-226, Molecular Aspects of Sulfur Assimilation and Acclimation to Sulfur Supply in Plants	
Ne		KAZUKI SAITO ET AL., Plant Phys., vol. 106:887-895, 1994, Modulation of Cystine Biosynthesis in Chloroplasts of Transgenic Tobacco Overexpressing Cystein Synthase [O-Acetylserine(thiol)-lyase]	
Ne		KAZUKI SAITO ET AL., Comptes Rendu De L'Academie Des Sciences, vol. 319:969-973, 1996, Molecular characterization of cysteine biosynthetic enzymes in plants	
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Ne		MICHAEL A. ROBERTS ET AL., Plant Molecular biology, vol. 30:1041-1049, 1996, Cloning and characterisation of an Arabidopsis thaliana cDNA clone encoding an organellar isoform of serine acetyltransferase	
Ne		KAZUKI SAITO ET AL., Journ. of Biol. Chem., vol. 270(27):16321-16326, 1995, Molecular cloning and characterization of a Plant Serine acetyltransferase playing a regulatory role in cystein biosynthesis from watermelon	

Examiner Signature	<i>Noted</i>	Date Considered	12/03/02
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Sheet 4 of 4

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Application Number	09/720,318
Filing Date	December 21, 2000
First Named Inventor	Saverio Carl Falco et al.
Group Art Unit	Unknown
Examiner Name	Unknown
Attorney Docket Number	BB1167C US PCT

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

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NE		EMBL SEQUENCE DATA LIBRARY ACCESSION NO: A1637166, 04-27-99, WALBOT, V., Maize ESTs from various cDNA libraries sequenced at Stanford University, XP-002123195	
NE		SANGMAN LEE ET AL., Biochem. and Biophys. Res. Comm., vol. 247:171-175, 1998, APS Kinase from Arabidopsis thaliana: Genomic Organization, Expression, and Kintetic Analysis of the Recombinant Enzyme	
NE		AJAY JAIN ET AL., Plant Phys., vol. 105:771-772, 1994, A cDNA clone for 5'-Adenylylphosphosulfate Kinase from Arabidopsis thaliana	
NE		SANDRA SCHIFFMANN ET AL., FEBS Lett., vol. 355:229-232, 1994, APS-sulfotransferase activity is identical to higher plant APS-kinase	
		JULIE ANN BICK ET AL., Current Opinion in Plant Biology, vol. 1(3):240-244, 1998, Plant sulfur metabolism - the reduction of sulfate to sulfite <i>See page 2</i>	
NE		HILDEGARD E. ARZ ET AL., Biochimica et Biophysica Acta., vol. 1218:447-452, 1994, A cDNA for adenylyl sulphate (APS)-kinase from Arabidopsis thaliana	
NE		ANGELO BOLCHI ET AL., Plant Mol. Biol., vol. 39:527-537, 1999, Coordinate modulation of maize sulfate permease and ATP sulfurylase mRNAs in response to variations in sulfur nutritional status: stereospecific down-regulation by L-cystein	
NE		KEIKO YONEKURA-SAKAKIBARA ET AL., J. Biochem., vol. 24:615-621, 1998, Molecular Characterization of Tobacco Sulfite Reductase: Enzyme Purification, Gene Cloning, and Gene Expression Analysis	
	*	NATIONAL CENTER FOR BIOTECHNOLOGY INFORMATION GENERAL IDENTIFIER NO. 2738756, 7/21/98, BICK, J.A. ET AL., Glutaredoxin function for the carboxyl-terminal domain of the plant-type 5'-adenylylsulfate reductase	
NE		YICHANG CHEN ET AL., Plant phys., vol. 116:867-869, 1998, Three Genomic Clones from Arabidopsis thaliana Encoding 5'-Adenylylsulfate Reductase	
	*	NATIONAL CENTER FOR BIOTECHNOLOGY INFORMATION GENERAL IDENTIFIER NO., 1488043, 11/2/99, PRIOR, A. ET AL., Structural and kinetic properties of adenylyl sulfate reductase from Catharanthus roseus cell cultures	

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Date Considered

12/3/02

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		Application Number	09/720,318		
		Filing Date	December 21, 2000		
		First Named Inventor	Saverio Carl Falco		
		Art Unit	1652		
		Examiner Name	Nashed, Nashed T.		
Sheet	1	of	1	Attorney Docket Number	BB-1167-C

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No.†	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
X <i>NE</i>		GENBANK Database Accession No. AAC26979, NCBI GI No. 2738756, 5'-adenylylsulfate reductase [Arabidopsis thaliana], 21 July 1998	<input type="checkbox"/>
X <i>NE</i>		GENBANK Database Accession No. AAB05871, NCBI GI No. 1488043, PAPS-reductase-like protein [Catharanthus roseus], 10 August 1996	<input type="checkbox"/>
X <i>NE</i>		GENBANK Database Accession No. AAB05871.1, NCBI GI No. 1488043, PAPS-reductase-like protein [Catharanthus roseus], 2 November 1999	<input type="checkbox"/>
X <i>NE</i>		GENBANK Database Accession No. AAB05871.2, NCBI GI No. 12831474, PAPS-reductase-like protein [Catharanthus roseus], 15 February 2001	<input type="checkbox"/>
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